

EXHIBIT

A

RECID = 1879
CONTROLNO = OMA_EM00000058
BATESBEG =
BATESEND =
FROM : Gross, Bob
TO : Magnusson, Oskar
CC :
BCC :
DATESENT = 05/26/2004
TIMESENT : 09:19:53
DATERECD = 05/26/2004
TIMERECD : 09:19:59
CUSTODIAN : OMagnusson
SUBJECT : UTRAN IP
ATTACHMENT :
BODY : Oskar,

I apparently called the wrong lawyer. Our General Counsel called our Patent lawyer after we spoke earlier to confirm his opinion that we don't have any blocking IP.

The Patent lawyer indicates that we do have blocking IP (he'll e-mail me the Patent #) that applies to CDMA systems and that we will declare it at the appropriate time (whatever that means). If I understand the terms of the settlement between our two organizations, you have access to this IP without any licensing fees.

Does this create a problem?

On the other topic, I don't have the authority to delay the submittal of this WI. Powers much higher have decided that this will be done.

Regards,

Bob

EXHIBIT

B

Technical Specification Group GERAN
Meeting #11, Los Angeles, U.S.A., 26 – 30 August 2002

Report

Source: Secretary TSG GERAN, Paolo Usai
Title: Report of TSG GERAN meeting #11, version 0.0.2
Document for: Comment

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The TSG GERAN Chairman presented TD GP-022210 **LS on Shared Networks**, from 3GPP TSG SA WG2. The document was allocated to A. I. 7.2.4.1. Noted at TSG GERAN Plenary.

The TSG GERAN Chairman presented TD GP-022356 **LS on Shared Networks**, from 3GPP TSG CN WG4. The document was also allocated to A. I. 7.2.4.1. Noted at TSG GERAN Plenary.

The TSG GERAN Secretary presented TD GP-022213 **Response LS to "Liaison statement on DTMF"**, from 3GPP TSG SA WG4. The document was also allocated to A. I. 7.2.4.1, but it was noted that TS 48.060 under WG1 responsibility would be impacted in case the inband solution is chosen. In any case, waiting for the chosen option, GERAN was not too concerned about the potential consequences.

The TSG GERAN Chairman presented TD GP-022351 **LS on GERAN lu-mode capability**, from 3GPP TSG CNWG1. The document was also allocated to A. I. 7.2.4.1. Noted.

The TSG GERAN Chairman presented TD GP-022558 **Reply LS on "Gb evolution"**, from 3GPP TSG SA WG2. SA2 kindly asks GERAN to clarify the differences between the GERAN lu and the UTRAN lu. To address the architectural aspects of Gb evolution, SA2 proposes to hold a joint SA2/GERAN meeting; the current committee calendars show that an appropriate timeframe for such a meeting could be the second half of September. An answer was agreed to be drafted after the discussion on the A/Gb feasibility study (c/o J-L Carrizo).

4.2 From Partners and their bodies

The TSG GERAN Chairman presented TD GP-022469 **LS on Unclear standardisation of AT command + WS46**, from GSMA TWG. This LS was allocated to TSG GERAN WG2 for further consideration under A. I. 7.2.4.2. A problem was raised related to the possibility to select dual-mode operation; a short reply was asked to be drafted and considered in WG1.

4.3 Others

None.

5 Reports from Working Group and Ad-hoc meetings

5.1 GERAN Working Group meetings

None.

5.2 Ad-Hoc meetings

None.

6 Common GSM EDGE Radio Access Network matters

6.1 Location Services (LCS) - General Aspects

Mr. R. Robinson presented TD GP-022138 **Update to TS 22.071 for United States specific mandated location accuracy requirements for US implementations (For information)**, from TruePosition. It was questioned whether the change was really needed, considering that specific regulatory case is already included in the specification. Comment was made on the tolerances and accuracy of requirements for terminals and/or networks, respectively, to fulfil the positioning requirements; separate measurements on MSs, LMU and/or network were requested to be considered with attention, in view to achieve systems working in real networks.

Mr. R. Robinson presented TD GP-022551 **Uplink TDOA location determination for GSM/GPRS: Proposed Rel-6 work item**, from TruePosition. The objective of this Work Item is to include Uplink TDOA as a location determination method for GSM/GPRS in the 3GPP Release 6 specifications. Concern was expressed on opening this WI, as well as the lack of the necessary four supporting Companies was pointed out. The discussion was left to be completed in WG1 along the week, under A.I. 7.1.5.6.

Mr. S. Edge presented TD GP-022131 **Limitations of AGPS and E-OTD Positioning in GERAN**, from Siemens. The document was also allocated to A. I. 7.1.5.6 and 7.2.5.3.6.

EXHIBIT

C

3GPP TSG-GERAN WG2 Meeting #14bis
San Diego, USA, 19-23 May 2003

Tdoc #G2-030283
Agenda Item 5.3.5.1

CR-Form-v7	
CHANGE REQUEST	
% 49.031 CR 022 % rev 3 %	Current version: 5.3.0 %

For HELP on using this form, see bottom of this page or look at the pop-up text over the % symbols.

Proposed change affects: UICC apps% ☐ ME ☐ Radio Access Network ☒ Core Network ☐

Title: % Proposed modification of BSSAP-LE signalling for U-TDOA	
Source: % TruePosition	
Work item code: % UTD0A-CS	Date: % 19/05/2003
Category: % B <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 45%;"> <p><i>Use one of the following categories:</i></p> <p>F (correction)</p> <p>A (corresponds to a correction in an earlier release)</p> <p>B (addition of feature),</p> <p>C (functional modification of feature)</p> <p>D (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p> </div> <div style="width: 45%;"> <p>Release: % Rel-6</p> <p><i>Use one of the following releases:</i></p> <p>2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>Rel-4 (Release 4)</p> <p>Rel-5 (Release 5)</p> <p>Rel-6 (Release 6)</p> </div> </div>	

Reason for change: % Add new location determination method into the BSSAP-LE messages
Summary of change: % Include U-TDOA designators in the Positioning Data information element
Consequences if not approved: % U-TDOA will not be included in this specification

Clauses affected: % 5.1.1, 10.20					
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table> <div style="display: inline-block; vertical-align: top; margin-left: 10px;"> Other core specifications % <input type="checkbox"/> Test specifications % <input type="checkbox"/> O&M Specifications % <input type="checkbox"/> </div>	Y	N	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Y	N				
<input checked="" type="checkbox"/>	<input type="checkbox"/>				
Other comments: %					

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked % contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/>. For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

<<First changed section>>

5.1.1 Successful Operation

The initiator of the location request sends a BSSMAP-LE Perform Location Request to the SMLC associated with the current serving cell for the target MS. The message contains the following mandatory (M), conditional (C) and optional (O) information, where conditional parameters are required if available.

- Location Type (M).
- Cell Identifier (M).
- Classmark Information Type 3 (C).
- LCS Client Type (C).
- Chosen Channel (C).
- LCS Priority (C).
- LCS QoS (C).
- Requested GPS Assistance Data (C).
- BSSLAP APDU (C).
- LCS Capability (O).
- Packet Measurement Report (O).
- Measured Cell Identity List (O).

If requested, the SMLC performs positioning of the target MS using a particular position method or a combination of more than one positioning method. If neither the Classmark Information Type 3 IE nor the LCS Capability IE is present, the SMLC shall instigate only network based positioning methods (e.g. TA and ~~UTDOA~~ but not GPS or E-OTD).

Alternatively, if requested otherwise, the SMLC may provide positioning assistance data to the MS. The SMLC may invoke the following other BSSAP-LE procedures to perform these procedures:

- connection oriented information transfer;
- connectionless information transfer;
- LMU connection establishment;
- LMU connection release;
- DTAP-LE information transfer.

<<Last changed section>>

10.20 Positioning Data

This is a variable length information element providing positioning data associated with a successful or unsuccessful location attempt for a target MS.

	8	7	6	5	4	3	2	1
Octet 1	IEI							
Octet 2	Length indicator							
Octet 3	spare				Positioning Data Discriminator			
Octets 4-4+m	Positioning Method 1							
Octets ..4+nm	Positioning Method n							

Figure 10.20.1/3GPP TS 49.031: Positioning Data IE

The positioning data discriminator (bits 4-1 of octet 3) defines the type of data provided for each positioning method:

0000 indicate usage of each positioning method that was attempted either successfully or unsuccessfully

all other values are reserved.

Coding of the positioning method octets for positioning data discriminator = 0:

Octet x	positioning method	usage
---------	--------------------	-------

Coding of positioning method (bits 8-4):

00000 Timing Advance
 00001 Reserved (Note)
 00010 Reserved (Note)
 00011 Mobile Assisted E-OTD
 00100 Mobile Based E-OTD
 00101 Mobile Assisted GPS
 00110 Mobile Based GPS
 00111 Conventional GPS
 01000 U-TDOA

01001
 01000

to reserved for GSM
 01111

10000
 to reserved for network specific positioning methods
 11111

Coding of usage (bits 3-1)

000 Attempted unsuccessfully due to failure or interruption
 001 Attempted successfully: results not used to generate location
 010 Attempted successfully: results used to verify but not generate location
 011 Attempted successfully: results used to generate location
 100 Attempted successfully: case where MS supports multiple mobile based positioning methods and the actual method or methods used by the MS cannot be determined

NOTE: These values of the codepoints shall not be used as they were used in an earlier version of the protocol.

EXHIBIT

D

Title: Approved Report of the 25th 3GPP TSG RAN meeting
(Palm Springs, US, 7 – 9 September 2004)

Source: 3GPP support



César Gutiérrez Miguélez
ETSI Mobile Competence Center
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The document presents justification for the creation of a new WT, focused on 10 code HSDPA UEs (Cat. 7 & 8) based on Equaliser receiver.

The creation of this WT doesn't stop or interfere the current work under "Performance Requirements of Receive Diversity for HSDPA" for Cat. 7 & 8 UEs, which is based on the increased performance due to RX diversity.

The Description Sheet is provided below.

RP-040375 New WT proposal: Improved performance requirements for HSDPA categories 7 & 8 (Nokia)

Supporting companies are: Cingular, Nokia, NTT DoCoMo, Motorola, Panasonic, Samsung, Siemens, T-Mobile, Vodafone and Ericsson.

Jussi clarified that this WI doesn't close the existing one, it will set a parallel group of requirements.

The expected completion date is June 2005, it is however the intention that the new requirements are included in Rel-6.

The WT is approved

RP-040376 Modification of schedule for improved receiver performance requirement for HSDPA WI (Nokia)

The WI Sheet for the umbrella building block is modified to take into account the new Work Task and the change in schedule of the WT for RX diversity.

The modifications proposed are approved.

RP-040347 Inclusion of Uplink TDOA UE positioning method in the UTRAN specifications (TruePosition)

Robert Gross (TruePosition) presented this proposal

Derek Richards (IPWireless) explained that, after discussion with some companies, there is no need to make the WI FDD-specific. Robert agreed to remove the references to FDD from the Description Sheet.

Other minor editorial modifications were proposed, also only one rapporteur should be appointed.

It was asked if the specification LMU-SMLC interface is under the scope. Robert explained that not the short term, but it is envisaged for the future. He noted that specifying now that interface would be undesirable for the deployments being made by some operators.

The specification of the LMU performance requirements was contested; as it wasn't formally agreed in RAN4.

It was found that the timeline was stretched; in particular the LMU specification is scheduled for completion in two years. It is however argued that nothing stops companies from contributing and speeding the work.

A revision of the WI sheet will be provided considering the comments above, but the proposal is essentially approved

RP-040387 Inclusion of Uplink TDOA UE positioning method in the UTRAN specifications (TruePosition)

The Sheet is modified with the comments above. Supporting companies are : Cingular Wireless, T-Mobile USA, TruePosition, Andrew Corporation, SBC Communications and IPWireless.

The WI is approved